



FORM PTO-1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE										Atty Docket No.: 153454600019									
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)																			
(37 CFR 1.98(b))																			
Serial No.: 10/823,206																			
Applicant(s): Anguera Pros et al.																			
Filing Date: April 13, 2004																			
Group: Not Yet Assigned										2821									
U.S. PATENT DOCUMENTS																			
Exam. Init.		Patent Number							Issue Date	Patentee	Class	Subclass	Filing Date						
HN	2002/	0	0	0	0	9	4	0	01/03/2002	Moren et al.									
	2002/	0	0	0	0	9	4	2	01/03/2002	Duroux									
	2002/	0	0	3	6	5	9	4	03/28/2002	Gyenes									
	2002/	0	1	0	5	4	6	8	08/08/2002	Tessier et al.									
	2002/	0	1	0	9	6	3	3	08/15/2002	Ow et al.									
	2002/	0	1	2	6	0	5	4	09/12/2002	Fuerst et al.									
	2002/	0	1	2	6	0	5	5	09/12/2002	Lindenmeier et al.									
	2002/	0	1	7	5	8	6	6	11/28/2002	Gram									
		3	5	2	1	2	8	4	07/21/1970	Shelton, Jr. et al.									
		3	5	9	9	2	1	4	08/10/1971	Altmayer									
		3	6	2	2	8	9	0	11/23/1971	Fujimoto et al.									
		3	6	8	3	3	7	6	08/08/1972	Pronovost									
		3	8	1	8	4	9	0	06/18/1974	Leahy									
		3	9	6	7	2	7	6	06/29/1976	Goubau									
		3	9	6	9	7	3	0	07/13/1976	Fuchser									
		4	0	2	4	5	4	2	05/17/1977	Ikawa et al.									
		4	1	3	1	8	9	3	12/26/1978	Munson et al.									
		4	1	4	1	0	1	6	02/20/1979	Nelson									
		4	4	7	1	3	5	8	09/11/1984	Glasser									
		4	4	7	1	4	9	3	09/11/1984	Schober									
		4	5	0	4	8	3	4	03/12/1985	Garay et al.									
		4	5	4	3	5	8	1	09/24/1985	Nemet									
		4	5	7	1	5	9	5	02/18/1986	Phillips et al.									
		4	5	8	4	7	0	9	04/22/1986	Kneisel et al.									
		4	5	9	0	6	1	4	05/20/1986	Erat									
		4	6	2	3	8	9	4	11/18/1986	Lee et al.									
		4	6	7	3	9	4	8	06/16/1987	Kuo									
		4	7	3	0	1	9	5	03/08/1988	Phillips et al.									
		4	8	3	9	6	6	0	06/13/1989	Hadzoglou									
		4	8	4	3	4	6	8	06/27/1989	Drewery									
		4	8	4	7	6	2	9	07/11/1989	Shimazaki									
		4	8	4	9	7	6	6	07/18/1989	Inaba et al.									
		4	8	5	7	9	3	9	08/15/1989	Shimazaki									
		4	8	9	0	1	1	4	12/26/1989	Egashira									
		4	8	9	4	6	6	3	01/16/1990	Urbish et al.									
✓		4	9	0	7	0	1	1	03/06/1990	Kuo									
HN		4	9	1	2	4	8	1	03/27/1990	Mace et al.									

HN		4	9	7	5	7	1	1	12/04/1990	Lee				
		5	0	3	0	9	6	3	07/09/1991	Tadama				
		5	1	3	8	3	2	8	08/11/1992	Zibrik et al.				
		5	1	6	8	4	7	2	12/01/1992	Lockwood				
		5	1	7	2	0	8	4	12/15/1995	Fiedziszko et al.				
		5	2	0	0	7	5	6	04/06/1993	Feller				
		5	2	1	4	4	3	4	05/25/1993	Hsu				
		5	2	1	8	3	7	0	06/08/1993	Blacse				
		5	2	2	7	8	0	4	07/13/1993	Oda				
		5	2	2	7	8	0	8	07/13/1993	Davis				
		5	2	4	5	3	5	0	09/14/1993	Sroka				
		5	2	4	8	9	8	8	09/28/1993	Makino				
		5	2	5	5	0	0	2	10/19/1993	Day				
		5	2	5	7	0	3	2	10/26/1993	Diamond et al.				
		5	3	4	7	2	9	1	09/13/1994	Moore				
		5	3	5	5	1	4	4	10/11/1994	Walton et al.				
		5	3	5	5	3	1	8	10/11/1994	Dionnet et al.				
		5	3	7	3	3	0	0	12/13/1994	Jenness et al.				
		5	4	0	2	1	3	4	03/28/1995	Miller et al.				
		5	4	2	0	5	9	9	05/30/1995	Erkocevic				
		5	4	2	2	6	5	1	06/06/1995	Chang				
		5	4	5	1	9	6	5	09/19/1995	Matsumoto				
		5	4	5	1	9	6	8	09/19/1995	Emery				
		5	4	5	3	7	5	1	09/26/1995	Tsukamoto et al.				
		5	4	5	7	4	6	9	10/10/1995	Diamond et al.				
		5	4	7	1	2	2	4	11/28/1995	Barkeshli				
		5	4	9	3	7	0	2	02/20/1996	Crowley et al.				
		5	4	9	5	2	6	1	02/27/1996	Baker et al.				
		5	5	3	4	8	7	7	07/09/1996	Sorbello et al.				
		5	5	3	7	3	6	7	07/16/1996	Lockwood et al.				
		5	6	8	4	6	7	2	11/04/1997	Karidis et al.				
		5	7	1	2	6	4	0	01/27/1998	Andou et al.				
		5	7	6	7	8	1	1	06/16/1998	Mandai et al.				
		5	7	9	8	6	8	8	08/25/1998	Schofield				
		5	8	2	1	9	0	7	10/13/1998	Zhu et al.				
		5	8	4	1	4	0	3	11/24/1998	West				
		5	8	7	0	0	6	6	02/09/1999	Asakura et al.				
		5	8	7	2	5	4	6	02/16/1999	Ihara et al.				
		5	8	9	8	4	0	4	04/27/1999	Jou				
		5	9	0	3	2	4	0	05/11/1999	Kawahata et al.				
		5	9	2	6	1	4	1	07/20/1999	Lindenmeier et al.				
		5	9	4	3	0	2	0	08/24/1999	Liebendoerfer et al.				
		5	9	6	6	0	9	8	10/12/1999	Qi et al.				
		5	9	7	3	6	5	1	10/26/1999	Suesada et al.				
		5	9	8	6	6	1	0	11/16/1999	Miron				
		5	9	9	0	8	3	8	11/23/1999	Burns et al.				
		6	0	0	2	3	6	7	12/14/1999	Engblom et al.				
		6	0	2	8	5	6	8	02/22/2000	Asakura et al.				
✓		6	0	3	1	4	9	9	02/29/2000	Dichter				
HN		6	0	3	1	5	0	5	02/29/2000	Qi et al.				

#N		6	0	7	8	2	9	4	06/20/2000	Mitarai				
		6	0	9	1	3	6	5	07/18/2000	Derneryd et al.				
		6	0	9	7	3	4	5	08/01/2000	Walton				
		6	1	0	4	3	4	9	08/15/2000	Cohen				
		6	1	2	7	9	7	7	10/03/2000	Cohen				
		6	1	3	1	0	4	2	10/10/2000	Lee et al.				
		6	1	4	0	9	6	9	10/31/2000	Lindenmeier et al.				
		6	1	4	0	9	7	5	10/31/2000	Cohen				
		6	1	6	0	5	1	3	12/12/2000	Davidson et al.				
		6	1	7	2	6	1	8	01/09/2001	Hakozaki et al.				
		6	2	1	1	8	2	4	04/03/2001	Holden et al.				
		6	2	1	8	9	9	2	04/17/2001	Sadler et al.				
		6	2	3	6	3	7	2	05/22/2001	Lindenmeier et al.				
		6	2	6	6	0	2	3	07/24/2001	Nagy et al.				
		6	2	8	1	8	4	6	08/28/2001	Puente Baliarda et al.				
		6	3	0	7	5	1	1	10/23/2001	Ying et al.				
		6	3	2	9	9	5	1	12/11/2001	Wen et al.				
		6	3	2	9	9	5	4	12/11/2001	Fuchs et al.				
		6	3	6	7	9	3	9	04/09/2002	Carter et al.				
		6	4	0	7	7	1	0	06/18/2002	Keilen et al.				
		6	4	1	7	8	1	0	07/09/2002	Huels et al.				
		6	4	3	1	7	1	2	08/13/2002	Turnbull				
		6	4	4	5	3	5	2	09/03/2002	Cohen				
		6	4	5	2	5	4	9	09/17/2002	Lo				
		6	4	5	2	5	5	3	09/17/2002	Cohen				
✓		6	4	7	6	7	6	6	11/05/2002	Cohen				
		6	5	2	5	6	9	1	02/25/2003	Varadan et al.				
#N		6	5	5	2	6	9	0	04/22/2003	Veerassamy				

**FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION**

Exam. Init.		Document Number							Publication Date	Country or Patent Office	Class	Subclass	Translation	
#N		0	0	9	6	8	4	7	12/28/1983	EP			X (English Abstract)	
		0	2	9	7	8	1	3	06/24/1988	EP				
		0	3	5	8	0	9	0	08/29/1989	EP				
		0	5	4	3	6	4	5	05/26/1993	EP				
		0	5	7	1	1	2	4	11/24/1993	EP				
		0	6	8	8	0	4	0	12/20/1995	EP				
		0	7	6	5	0	0	1	03/26/1997	EP				
		0	8	1	4	5	3	6	12/29/1997	EP				
		0	8	7	1	2	3	8	10/145/1998	EP				
		0	8	9	2	4	5	9	01/20/1999	EP				
		0	9	2	9	1	2	1	07/14/1999	EP				
		0	9	3	2	2	1	9	07/28/1999	EP				
		0	9	4	2	4	8	8	04/19/2000	EP				
		0	9	6	9	3	7	5	01/05/2000	EP				
		0	9	8	6	1	3	0	03/15/2000	EP			X (English Abstract)	
		0	9	9	7	9	7	4	05/03/2000	EP				
✓		1	0	1	8	7	7	7	07/12/2000	EP				
		1	0	1	8	7	7	9	07/12/2000	EP				
#N		1	0	7	1	1	6	1	01/24/2001	EP				

#N		1	0	7	9	4	6	2	02/28/2001	EP				
		1	0	8	3	6	2	4	03/14/2001	EP				
		1	0	9	4	5	4	5	04/25/2001	EP				
		1	0	9	6	6	0	2	05/02/2001	EP				
		1	1	4	8	5	8	1	10/24/2001	EP				
		1	1	9	8	0	2	7	04/17/2002	EP				
		1	2	3	7	2	2	4	09/04/2002	EP			X (English Abstract)	
		1	2	6	7	4	3	8	12/18/2002	EP				
		2	5	4	3	7	4	4	10/05/1984	FR			X (English Abstract)	
		2	7	0	4	3	5	9	10/28/1994	FR				
		3	3	3	7	9	4	1	05/09/1985	DE			X (English Abstract)	
	5	5	1	4	7	8	0	6	11/18/1980	JP			X (English Abstract)	
		5	0	0	7	1	0	9	01/14/1993	JP			X (English Abstract)	
		5	1	2	9	8	1	6	05/25/1993	JP			X (English Abstract)	
		5	2	6	7	9	1	6	10/15/1993	JP			X (English Abstract)	
		5	3	4	7	5	0	7	12/27/1993	JP			X (English Abstract)	
		6	2	0	4	9	0	8	07/22/1994	JP			X (English Abstract)	
	1	0	2	0	9	7	4	4	08/07/1998	JP				
		2	1	1	2	1	6	3	03/16/1998	ES			X (English Abstract)	
		2	1	4	2	2	8	0	05/06/1998	ES				
		2	2	1	5	1	3	6	09/13/1989	GB				
		2	3	3	0	9	5	1	05/05/1999	GB				
		2	3	5	5	1	1	6	04/11/2001	GB				
		9	5	1	1	5	3	0	04/27/1995	PCT				
		9	6	2	7	2	1	9	09/06/1996	PCT				
		9	6	2	9	7	5	5	09/26/1996	PCT				
		9	6	3	8	8	8	1	12/05/1996	PCT				
		9	7	0	6	5	7	8	02/20/1997	PCT				
		9	7	1	1	5	0	7	03/27/1997	PCT				
		9	7	3	2	3	5	5	09/04/1997	PCT			X (English Abstract)	
		9	7	3	3	3	3	8	09/12/1997	PCT				
		9	7	3	5	3	6	0	09/25/1997	PCT				
		9	7	4	7	0	5	4	12/11/1997	PCT				
		9	8	1	2	7	7	1	03/26/1998	PCT				
		9	8	3	6	4	6	9	08/20/1998	PCT				
		9	9	0	3	1	6	6	01/21/1999	PCT				
		9	9	0	3	1	6	7	01/21/1999	PCT				
		9	9	2	5	0	4	2	05/20/1999	PCT				
		9	9	2	7	6	0	8	06/03/1999	PCT				
		9	9	5	6	3	4	5	11/04/1999	PCT				
		0	0	0	1	0	2	8	01/06/2000	PCT				
		0	0	0	3	4	5	3	01/20/2000	PCT				
		0	0	2	2	6	9	5	04/20/2000	PCT				
		0	0	3	6	7	0	0	06/22/2000	PCT				
✓		0	0	4	9	6	8	0	08/24/2000	PCT				
#N		0	0	5	2	7	8	4	09/08/2000	PCT				

#N		0	0	5	2	7	8	7	09/08/2000	PCT				
		0	1	0	3	2	3	8	01/11/2001	PCT				
		0	1	0	8	2	5	7	02/01/2001	PCT				
		0	1	1	3	4	6	4	02/22/2001	PCT				
		0	1	1	7	0	6	4	03/08/2001	PCT				
		0	1	2	2	5	2	8	03/29/2001	PCT				
		0	1	2	4	3	1	4	04/05/2001	PCT				
		0	1	2	6	1	8	2	04/12/2001	PCT				
		0	1	2	8	0	3	5	04/19/2001	PCT				
		0	1	3	1	7	3	9	05/03/2001	PCT				
		0	1	3	3	6	6	5	05/10/2001	PCT				
		0	1	3	5	4	9	1	05/17/2001	PCT				
		0	1	3	7	3	6	9	05/25/2001	PCT				
		0	1	3	7	3	7	0	05/25/2001	PCT				
		0	1	4	1	2	5	2	06/07/2001	PCT				
		0	1	4	8	8	6	1	07/05/2001	PCT				
		0	1	5	4	2	2	5	07/26/2001	PCT				
		0	1	7	3	8	9	0	10/04/2001	PCT				
		0	1	7	8	1	9	2	10/18/2001	PCT				
		0	1	8	2	4	1	0	11/01/2001	PCT				
		0	2	3	5	6	4	6	05/02/2002	PCT				
✓	0	2	0	9	1	5	1	8	11/14/2002	PCT				
#N	0	2	0	9	6	1	6	6	11/28/2002	PCT				
OTHER DOCUMENTS (Including Author, Title, Date**, Relevant pages, Place of Publication***)														
#N		Ali, M. et al., "A Triple-Band Internal Antenna for Mobile Hand-held Terminals," IEEE, pp. 32-35 (1992)												
		Romeu, Jordi et al., "A Three Dimensional Hilbert Antenna," IEEE, pp. 550-553 (2002)												
		Parker et al., "Microwaves, Antennas & Propagation," IEEE Proceedings H, pp. 19-22 (February 1991)												
		Hansen, R.C., "Fundamental Limitations in Antennas," Proceedings of the IEEE, Vol. 69, No. 2, pp. 170-182 (February 1981)												
		Jaggard, Dwight L., "Fractal Electrodynamics and Modeling," Directions in Electromagnetic Wave Modeling, pp. 435-446 (1991)												
		Hohlfeld, Robert G. et al., "Self-Similarity and the Geometric Requirements for Frequency Independence in Antennae," Fractals, Vol. 7, No. 1, pp. 79-84 (1999)												
		Samavati, Hiran, et al., "Fractal Capacitors," IEEE Journal of Solid-State Circuits, Vol. 33, No. 12, pp. 2035-2041 (December 1998)												
		Pribetich, P., et al., "Quasifractal Planar Microstrip Resonators for Microwave Circuits," Microwave and Optical Technology Letters, Vol. 21, No. 6, pp. 433-436 (June 20, 1999)												
		Zhang, Dawei, et al., "Narrowband Lumped-Element Microstrip Filters Using Capacitively-Loaded Inductors," IEEE MTT-S Microwave Symposium Digest, pp. 379-382 (May 16, 1995)												
		Gough, C.E., et al., "High Tc coplanar resonators for microwave applications and scientific studies," Physica C, NL, North-Holland Publishing, Amsterdam, Vol. 282-287, No. 2001, pp. 395-398 (August 1, 1997)												
		Radio Engineering Reference--Book by H. Meinke and F.V. Gundlach, Vol. 1, Radio components. Circuits with lumped parameters. Transmission lines. Wave-guides. Resonators. Arrays. Radio waves propagation, States Energy Publishing House, Moscow, with English translation (1961) [4 pp.]												
		V.A. Volgov, "Parts and Units of Radio Electronic Equipment (Design & Computation)," Energiya, Moscow, with English translation (1967) [4 pp.]												
		Puente, C., et al., "Multiband properties of a fractal tree antenna generated by electrochemical deposition," Electronics Letters, IEE Stevenage, GB, Vol. 32, No. 25, pp. 2298-2299 (December 5, 1996)												
		Puente, C., et al., "Small but long Koch fractal monopole," Electronics Letters, IEE Stevenage, GB, Vol. 34, No. 1, pp. 9-10 (January 8, 1998)												
		Puente Baliarda, Carles, et al., "The Koch Monopole: A Small Fractal Antenna," IEEE Transactions on Antennas and Propagation, New York, US, Vol. 48, No. 11, pp. 1773-1781 (November 1, 2000)												
		Cohen, Nathan, "Fractal Antenna Applications in Wireless Telecommunications," Electronics Industries Forum of New England, 1997. Professional Program Proceedings Boston, MA US, May 6-8, 1997, New York, NY US, IEEE, US pp. 43-49 (May 6, 1997)												
✓		Anguera, J. et al. "Miniature Wideband Stacked Microstrip Patch Antenna Based on the Sierpinski Fractal Geometry," IEEE Antennas and Propagation Society International Symposium, 2000 Digest. Aps., vol. 3 of 4, pages 1700-1703 (July 16, 2000)												
#N		Hara Prasad, R.V., et al., "Microstrip Fractal Patch Antenna for Multi-Band Communication," Electronics Letters, IEE Stevenage, GB, vol. 36, no. 14, pages 1179-1180 (July 6, 2000)												

HN	Borja, C. et al., "High Directivity Fractal Boundary Microstrip Patch Antenna," Electronics Letters. IEE Stevenage, GB, vol. 36, no. 9, pages 778-779 (April 27, 2000)
HN	Sanad, Mohamed, "A Compact Dual-Broadband Microstrip Antenna Having Both Stacked and Planar Parasitic Elements," IEEE Antennas and Propagation Society International Symposium 1996 Digest, July 21-26, 1996, pp. 6-9
Examiner	Date Considered 9/12/06
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	